



Test Report : DETN02M-12

2W SMD Package DC-DC Unregulated Converter

■ DESIGN VERIFY TEST

Output Function Test

Input Function Test

Protection Function Test

■ SAFETY TEST

Safety Test

■ RELIABILITY TEST

Environment Test

Other

DESIGN VERIFY TEST
OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	VOLTAGE ACCURACY	-2.0 % ~ +2.0 %	I/P:12VDC O/P:FULL LOAD Ta:25°C	V1 -0.81% V2 -0.82%	P
2	RIPPLE & NOISE	75 mVp-p	I/P:12VDC O/P:FULL LOAD Ta:25°C	V1 13mV V2 13mV	P
3	LINE REGULATION	-12.0% ~ +12.0%	I/P:10.8VDC~13.2VDC O/P:FULL LOAD Ta:25°C	V1 -10.93% ~ -11.07% V2 -10.93% ~ +11.07%	P
4	LOAD REGULATION	-8.0% ~ +8.0%	I/P:12VDC O/P:10% LOAD~FULL LOAD Ta:25°C	V1 -1.75% ~ +2.09% V2 -1.74% ~ +2.06%	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	EFFICIENCY	82% (Typ)	I/P:12VDC O/P:FULL LOAD Ta:25°C	83.15%	P
2	DC CURRENT	203 mA / FULL LOAD 30 mA / NO LOAD	I/P:12VDC O/P:NO / FULL LOAD Ta:25°C	197.7 mA / FULL LOAD 19.13 mA / NO LOAD	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	SHORT PROTECTION	< 0.5S Max	I/P:13.2VDC O/P:FULL LOAD Ta:25°C	OK	P

SAFETY TEST
SAFETY TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P:3.0K VDC/min	I/P-O/P:3.0K VDC/min Ta:25°C	I/P-O/P: 0.002mA NO DAMAGE	P
2	ISOLATION RESISTANCE	I/P-O/P:500VDC>100MΩ	I/P-O/P:500 VDC Ta:25°C	I/P-O/P>100MΩ NO DAMAGE	P

RELIABILITY TEST
ENVIRONMENT TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT												
1	TEMPERATURE RISE TEST	1. ROOM AMBIENT BURN-IN : 8HRS I/P:12VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 8HRS I/P:12VDC O/P:FULL LOAD Ta=85°C 3. HIGH AMBIENT BURN-IN : 8HRS I/P:12VDC O/P:75% LOAD Ta=90°C 4. HIGH AMBIENT BURN-IN : 8HRS I/P:12VDC O/P:50% LOAD Ta=97°C			P												
		<table border="1"> <thead> <tr> <th>NO</th> <th>Position</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CASE</td> <td>36.4°C</td> <td>96.4°C</td> <td>99.4°C</td> <td>105.5°C</td> </tr> </tbody> </table>				NO	Position	1	2	3	4	1	CASE	36.4°C	96.4°C	99.4°C	105.5°C
NO	Position	1	2	3	4												
1	CASE	36.4°C	96.4°C	99.4°C	105.5°C												
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 4 HOURS	I/P:12VDC O/P: FULL LOAD Ta= -40°C	TEST : OK	P												

OTHER

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	MTBF	MIL-HDBK-217F,GB,25°C TOTAL FAILURE RATE : 1.14693 M.T.B.F : 880K HRS			P

TEST RESULT	TESTER	APPROVAL
PASS	ARCHEN HSIAO	PETER CHENG